Application # FA1- 00612-1 (CIRM Institute)

PROPOSAL:

This applicant proposes construction of a new three-story stem cell research facility that will consolidate basic and discovery research, preclinical research and preclinical development, and clinical research programs. The facility will include a stem cell culture core, a videoconferencing center, and clinical/human performance and regulatory functions associated with clinical activities. In addition to typical biochemistry research laboratories, the building will include outpatient clinical space to facilitate interaction among researchers in all three areas of investigation

The CIRM Institute consists of 38,907 assignable square feet (asf) and 61,575 gross square feet (gsf) at a total cost of $60,907,000 and requested CIRM funding of $37,000,000. The project will co-locate investigators and expand research capacity. A portion of the applicant's stem cell research team is currently located off campus in leased facilities. At occupancy, the facility will house 16 research teams (PIs) of which six will be new to the institution. The applicant also noted space will be available for 10 visiting researchers. The applicant indicates that a sub-grade level shell space will be considered for full funding by the applicant to accommodate future expansion needs. This shell space is not included in the CIRM proposal. Completion of the project is scheduled for July 2010.

Space Summary Table

Space Category	Amount of Space (asf)	Percent of Total	ASF per PI at 16
Lab, Lab Support, PI Offices	33,750	87%	2,109
Core Facilities	3,452	9%	216
Other Offices	1,195	3%	75
Administration and Other Support	510	1%	32
Total	38,907	100%	2,432

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STAFF ANALYSIS

VALUE:

Costs:

Cost Summary Table

Cost Category	Total Amount	Amount/ PI
Building	$55,753,000	$3,484,563
Group 2 Equipment	$5,154,000	$322,125
Total	$60,907,000	$3,806,688
CIRM Amount	$37,000,000	$2,312,500
Applicant Amount	$23,907,000	$1,494,188

The estimated total project cost is $60,907,000 with a building cost of $45,895,000, project management administrative costs of $7,476,000, a contingency set aside of $2.4 million, and Group 2 Equipment to be purchased as part of the project of $5,154,000.

The construction cost of $905/gsf is somewhat lower than the average of $936/gsf for the CIRM Institute funding category. The amount budgeted for equipment is low ($84/gsf) relative to the other proposals in this category ($122/gsf). The applicant plans to relocate a considerable amount of equipment to the building from the existing campus and leased space, and plans acquisition of equipment in connection with future recruitments. The equipment budget may be lower than others in this category because the facility includes a considerable amount of "dry" clinical outpatient space that will not require extensive outfitting with scientific laboratory equipment, however, clinical can also be very costly. Core space is also less than average, and equipment needs are proportionately lower as well.

The CIRM funding requested (excluding cores) per PI is $2,107,325, which is 23% higher than the average of $1,610,927 per PI among applications in this funding category.

Sustainability & Innovation

The application indicates that the design is expected to achieve a LEED certification at the Silver level and is striving to achieve a Gold level.

Elements of the application cited as innovative include use of a design-build delivery model, which this institution has demonstrated results in lower costs than traditional

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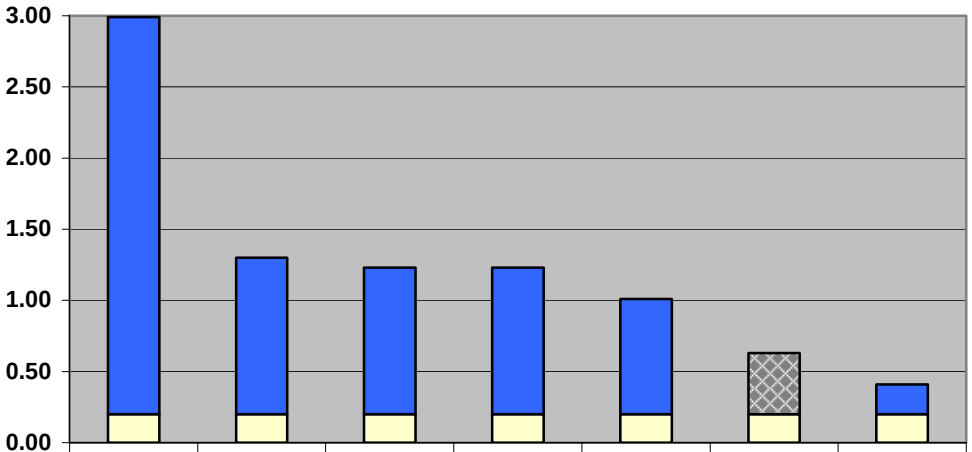
design-bid-build techniques. Most other design features responding to sustainability or innovation are typical of a Silver LEED facility and reflect good design practices that are responsive to environmental and resource conservation objectives. Several elements of the facility's design are noted as innovative, including a teleconferencing facility that will reduce travel and carbons related to travel. From a program perspective, the placement of outpatient clinical space adjacent to laboratories enhances opportunities for interaction among the researchers in these program areas.

LEVERAGE:

The application includes leverage of $16,047,400. This is the institutional investments in excess of the required matching funds after conforming to the allowable amount for fees and administrative costs. The CIRM funds to leverage ratio is 1:0.43. When both matching and leverage funds are considered, this ratio rises to 1:0.63. The following table compares the net leverage for this application (cross hatched) to the other applicants in the category of CIRM Institutes.



	609	607	618	619	611	612	613
Leverage	2.79	1.10	1.03	1.03	0.81	0.43	0.21
Matching (.20)	0.20	0.20	0.20	0.20	0.20	0.20	0.20

URGENCY:

The applicant began planning for the project in July 2007 and has obtained approval from its governing Board for the project design and environmental documentation.

The project schedule indicates that the design-build bidding process will begin in May 2008. The contract will be awarded in September 2008, with estimated completion by July 2010. The project qualifies for priority consideration because completion is projected within two years from approval of the grant.

The applicant's team for managing delivery of the project has been responsible for more than $1 billion dollars in applicant projects. Design-build contracting is noted as a particular expertise of this institution and has been used successfully to reduce costs and to deliver projects more quickly than traditional design-bid-build techniques.

SHARED RESOURCES:

The applicant indicates that existing facilities devoted to stem cell research house multiple cores. These include a spinal cord injury research center, a previously funded CIRM-funded stem cell vivarium and a transgenic mouse facility. Also referenced are the brain aging and dementia institute, functional oncol-imaging facility, a diabetes research and treatment facility, imaging and laser centers, a fluorescence dynamics lab and a spine institute. The applicant states that the estimated cost savings attributable to existing campus resources runs in excess of $100 million and encompass more than 75,000 asf. A balancing factor is that while the institution has many core services that are located nearby in other campus buildings, they are not as conveniently located as cores that might have been included in this building.

Cores:

- The Reeve-Irvine Research Center
- Stem Cell Center Vivarium (Funded, but not completed)
- The Clinical Spine Initiative (Not Completed)
- Transgenic Mouse Facility
- The John Tu and Thomas Yuen Center for Functional Onco-Imaging
- The Institute for Clinical Translational Science
- Center for Diabetes Research and Treatment
- Chao Family Comprehensive Cancer Center
- UCI Stroke Center
- Institute for Brain Aging and Dementia
- Center for Molecular and Mitochondrial Medicine and Genetics
- UCI Center for Research Imaging
- Brain Imaging Center
- Optical Biology Core
- The Beckman Laser Institute and Clinic
- Laboratory for Fluorescence Dynamics
- PharmSci High Throughput Screening Facility
- Gillespie Vivarium
- Mass Spectrometry Facility in Medical Sciences
- Services for Technology Transfer and Intellectual Property

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FUNCTIONALITY:

The proposed design responds to program needs by providing space with an assignable-to-gross space efficiency of 65% that has a full range of flexible laboratories, shared support and some core facilities. The building will house a stem cell research program that encompasses all three aspects of regenerative medicine, namely, a basic and discovery research program, a preclinical research program, and a preclinical development and clinical research program. The design responds to this need by co-locating clinical outpatient and investigator space in one building block that is adjacent to the building block housing wet lab research space. The applicant indicates that the facility is designed to create a physical and intellectual environment that promotes interaction and the creation of multi-disciplinary research teams, while at the same time being flexible enough to adapt to emerging research needs or technologies.

The institution is including in the bid documents as an alternate option a shell basement that would provide strategically-located expansion space for the program. This option, though not part of the CIRM-funded project, is an important one that will contribute to the functionality of the space when program growth might otherwise force some functions to relocate to another facility.

The research and clinical floor plans contain large and small rooms to accommodate evolving functional needs. Each lab has immediate access to both wet and dry isolated rooms, fume hoods, sinks, benches and storage space. The building offers multiple opportunities for interaction and synergistic involvement between the various research elements.

SUMMARY OF ISSUES FOR THE FACILITIES WORKING GROUP EVALUATION

Cost: How will the FWG weigh the fact that this proposal includes a considerable amount of dry clinical space that should be less costly to construct than the more utility intensive wet chemistry space that is typical of other CIRM Institute proposals?

Innovation: Should providing shell space for future expansion be considered innovative from a program standpoint?

Leverage: How will the FWG weigh leverage given that the net leverage for this proposal is second lowest among the applicants in this category?

Shared Resources: How will the FWG weigh the value of access to many existing cores?